June-July 2001 Newsletter

Please support our advertisers: HRO and the RF Connection. The paper edition was mailed at 3pm on Friday, June 9, 2001 This email edition adds the below FRC/PVRC meeting info. PVRC CALENDAR Weeklv Wed BWI Regional weekly breakfast. Wednesdays 7:30 am, Basil's Deli, Elkridge Landing Rd near BWI. Monthly Over-the-Hill Luncheon. TBA. June 7 Thu PVRC/NC meeting Fri SWVA meeting at Shoney's in West Salem Sat Open house at Frank Donovan W3LPL, 3055 Hobbs Road, Glenwood, MD June 19 Tue Northwest region meeting in Frederick, MD. Location TBA. June 19 Tue Tidewater Colony meeting night. June 23-24 Field Day. Please support the PVRC W3AO FD effort. K3RA is the organizer. July 5 Thu PVRC/NC meeting July 21 Sat Open house at Paul Hellenberg K4JA, Hamton Hall Rd, Callao, VA July 21 Sat Swap fest at Cary, NC. Info from Jim, WW4M July 28 Joint FRC/PVRC meeting at Old Troy Park, Morris Co, NJ 12N to dusk See directions: http://communities.msn.com/YCCCFRCParty Aug 18 Sat Fowlfest at W3YOZ park in Churchton, MD Sun PVRC meeting at the F.A.R.fest 2001 at PG Stadium in Bowie, MD We regret to report the passing of Frank Hoose, K4RZ of New Bern NC on 5/14/01. Frank was a long time member of PVRC. HAMFEST CALENDAR (JUN-OCT) (WITH UPDATES FROM K3SWZ) Jun 9 Sat Bloomsburg PA Jun 9 Sat Winston-Salem NC Jun 10 Sun Knoxville TN Hamfest Frederick MD Jun 17 Sun Jul 1 Sun Wilkes-Barre PA Jul 4 Wed Harrisburg PA Salisbury NC Hamfest Kimberton PA Jul 7 Sat. Jul 15 Sun Jul 21 Sat Cary NC Hamfest Jul 28 W Carolina, Waynesville NC Sat Jul 29 Sun Timonium MD ïċ₺ Aug 4 Roanoke VA Hamfest Berryville VA Sat Aug 5 Sun Westmister MD Aug 11 Sat Shrewsbury PA Aug 12 Sun Shelby NC Hamfest Sep 1 & 2 Sat/Sun Poconos area PA (QTH?) Sep 9 Sat. Sep 15 Allentown PA Sat Sep 16 Sun York PA Sep 30 Sun F.A.R.fest, Bowie MD

Oct 7

Sun

Howard County MD

Oct 14	Sun	Wrightstown PA
Oct 21	Sun	Sellersville PA
Oct 21	Sun	Westminster MD
Oct 28	Sun	Carlisle PA

JOINT PVRC/NCDXA MEETING ON JUNE 16TH AT W3LPL

The joint PVRC/NCDXA meeting will be held on Saturday, June 16th, at Phyllis and Frank Donovan's, 3055 Hobbs Road, Glenwood, MD. Festivities begin at noon. A local caterer will serve several varieties of BBQ for a modest fee. There will be lots of liquid refreshments as well. The event goes on rain-or-shine.

The directions below should allow you to find the W3LPL QTH from wherever you might be wandering. You can pick up a Maryland state highway map at the rest area on I-95, just south of Rt 32 (Exit 38). The MD state map shows Hobbs Rd very clearly.

Directions to W3LPL QTH from I-95:

Exit I-95 at Route 32 West (Exit 38B). After 8 miles Rt 32 becomes a two lane road. Two miles later, pass through a pair of traffic signals at Linden Church Rd. Three miles beyond Linden Church Rd you will encounter another pair of traffic signals. Turn left at the second of these signals onto Burntwoods Rd. Follow Burntwoods Rd for 1.7 miles and turn right on Hobbs Rd. Park in front of the towers.

Directions to W3LPL from I-70:

Exit I-70 at Route 97 South (Exit 76) towards Olney. Follow Rt 97 for 2 miles and turn left at the traffic signal onto McKendree Rd. (small shopping center at this intersection) Follow McKendree Rd for 1/2 mile and turn right on Hobbs Rd. Follow Hobbs Rd for one mile and park in front of the towers.

Directions to W3LPL from Georgia Avenue (Rt 97) in Montgomery County:

Follow Georgia Av north through Olney, Brookville and Sunshine into Howard County. Five miles north of the traffic signal in Sunshine, turn right onto Burntwoods Rd. Follow Burntwoods Rd for one mile and turn left onto Hobbs Rd. Park in front of the towers.

REPORT ON WRTC-2002 SELECTION PROCESS by Brian McGinness N3OC As most of you are aware, the CCF and SARL are co-sponsoring WRTC-2002 next July in Helsinki. The 13 largest contest clubs in the US have been invited to vote on nominees for the ten (10) US Team Captains.

The selection process is different this year. In past years, the US contest clubs were able to directly nominate a member to be their Team Captain. This year, all nominees are pooled together by east coast and west coast, and all of the 13 largest contest clubs will be voting $i \in \mathbb{R}$ five votes for west coast (W5,6,7,0) nominees.

I elected to use PVRC's board of trustees as our selection committee. We received very little notice, with a tight deadline, so I did not feel there was time to assemble some other process. And, the trustees represent the various outlying regions nicely, with eight of them now plus the four club officers makes a selection committee of twelve.

We debated the merits of giving priority to PVRCers, or not, giving priority to first time WRTCers, or not, and to negotiate votes with other clubs, or not. Some trustees had feelings on both sides of all the above issues.

So I elected to have the 12 selection committee members cast 10 "votes" just like PVRC will get, 5 for east coast and 5 for west coast. I will then total those votes, and cast PVRC's vote accordingly. I will announce how PVRC voted, but not how individual trustees voted. Hopefully there will not be any ties. I may break any ties myself, hi hi.

Most serious applicants have posted their resumes on www.contesting.com, so I forwarded all that information to the trustees to aid them in their selections, and also how many previous WRTCs the nominees had been to previously.

Within about a week, we should know how we are voting.

FORCE 12 DISCOUNT PURCHASE by Jim Horton, N3KTV

Now that Dayton is over and you did not get there to buy your antenna, you still have time to join the discount purchase through PVRC. Please pass this message to any PVRC members that you know who is inactive and may not receive the PVRC NEWSLETTER.

This offer is similar to last years offer, except the shipping will be to your address. The discount is for 15% off all products from the $\,$

2001 Catalog Price.

The details are:

- PVRC will collect the members' orders for FORCE 12 products at a flat 15% discount off the 2001 Catalog prices. All of the discount is to the members.
- ${\hspace{0.25cm}\text{--}\hspace{0.25cm}}$ The discount cannot be used in conjunction with any other FORCE 12 promotion or sale (including Dayton specials).
- You pay for regular price for shipping.
- Shipping is to your address.
- FORCE 12 will take payment by check or credit cards for your portion of the order.
- PVRC coordinates and consolidates the order. (That's my job.) If you are interested in participating or have any questions, you can get in touch with Jim Horton (N3KTV) via , home 301-258-9731, or FAX 301-977-7962

Send me your NAME, CALL SIGN, EMAIL ADDRESS, POSTAL ADDRESS, PHONE NUMBER, and FORCE 12 PRODUCT(s) you are interested in purchasing. Sending me a note now does not obligate you to order. It gives me an idea of who is interested, how many antennas and what other products we are looking at. We are looking to finalize the order at by the end of June.

You can checkout all the Force 12 Antenna selection at $\ddot{i}\dot{z}^{\frac{1}{2}}$ Sites/Force 12 Catalog)

OPEN HOUSE AT K4JA IN VIRGINIA ON JULY 21ST

Paul and Betsy Hellenberg invite you to attend the July K4JA PVRC open house on July 21 2001. Time 12 Noon until ? A lunch will be served around 1 PM. Tours of the New K4JA contest station and grounds located on 123 acres. Featured will be the separate contest house, antenna/tower workshop ,5 rotating AB-105 towers with stack OWA mono band antennas, a new SA fixed tower. Also a preview of the Giant 80M 4 square and the 160M tower 4 square.

Hiking trails are available for those that like to walk through the woods.

Please RSVP for food count to:

 or

Paul Hellenberg, Hampton Hall Road, PO BOX 339, Callao, VA 22435 or 804 529 7787 804 456 2099 Cellular

Detailed directions are available via a message to or his web site at www.k4ja.com.
Briefly:

From the West.

From Richmond, take Rt 360 East about 1 hour to Callao (Junction of Rt 202 & Rt 360). Turn left (North) on Rt 202 at go 2.5 miles tp K4JA. You will pass Hyacinth 0.5 miles before K4JA.

From the Northeast.

Take Rt 301 to the intersection of Rt 3. Take Rt 3 Southeast for 26.6 miles to Rt 202. Travel Southeast on Rt 202 for 14.8 miles to K4JA.

From the Northwest.

Take I-95 to Exit 130A East onto Rt 3. Proceed on Rt 3 for 49.5 miles to the town of Montross. Watch for a left exit onto Rt 202 at the south end of Montross. Travel SE on Rt 202 14.8 miles to K4JA.

Note: K4JA is on the east side of Rt 202 and is 600 feet south of the junction of Rt 202 and County 621.

V25A WPX CW 2001 by Brian McGinness, N3OC

Once again I decided to return to Antigua for WPX CW, with the intention of starting to get the station ready for CQWW in October, and having some fun as well. This year I was accompanied by Carsten, DL6LAU, a member of the Bavarian Contest Club (BCC).

The V26B station is a multi/multi station of the FRC that is rented out for anyone who wants to go down, subject to availability. It can accommodate anything from full multi/multi to single op QRP. It was started in around 1993 by WT3Q, N3BNA, KA2AEV and AB2E. Since then it has grown to probably the largest station in the Caribbean. Unfortunately, located in a 2-point country, it has a hard time being #1 when serious efforts are on from 3-point countries. (9Y, P4, PJ9).

Maintaining a multi-multi station in the Caribbean is a tough thing. The V26B station has seven towers and stacks on ten through forty, and with the few days a year we are on the island to maintain the station

it is a miracle anything works. So coming down in May equals more free time to enjoy the beach in October.

Rotors may last only 2-3 years down there, and a hurricane at any time can be devastating unless we can get the antennas down in time. The towers are intentionally kept short enough that they survive most hurricanes. Walking through the jungle behind the station you can always find twisted pieces of antenna elements from previous hurricanes.

Carsten arrived Tuesday evening and began checking things out. I arrived Wednesday afternoon, snuck through customs as a tourist, obtained V21N's jeep for the week, drove to the Transport Board to get a drivers license (hi), and headed out to the station. V26B is about a ten minute drive from the airport, which is always handy. And yes, they drive on the left, a little crazy but maybe not as bad as in Jamaica.

On my arrival Carsten started showing me some of the problems we would have to fix. The 10m stack had a bad rotor, and a dead bottom antenna, the one fixed on the USA. The top Hygain 15 meter antenna had the tips snapped off each side if it's reflector, but the driven element and the rest of the directors seemed OK. The bottom fixed 15 had been manually rotated by some dummy right into a guy cable that was bending it's reflector. Our stack of Force 12 20m monobanders, rivets and all, have survived several hurricanes and are a bit bent up but they are tough little antennas. We have the parts to fix them but don't to honor the storms they have survived! When the reflector gets too short, it becomes the driven element. When that gets too short, it becomes the director! Then we discard the element. hi.

And luckily both the shorty-40's appeared intact, and rotating. Our 3-element 80m wire beam into Eu was working fine, and we noted the 2-element wire beam into the US was now a 1-element.

But not too bad, we thought. We have a lot of spare parts stashed down there, so I can rebuild rotors and stackmatches and most antennas on the spot. So we swapped out the 10m rotor with our new "pigtailed" version without any terminal strip to corrode, and repaired a burned out PC board on the stack match control box. Our very nice 3/3/3 10m stack was now 100%, and by the way it beat Team Vertical by over 1000 OSOs on 10m!

The broken reflector was hopeless without more manpower and some tubing, so we decided to use it as it was, now a 4-el monobander without a reflector. But it seemed to be fine. The last step was to fix some mis-wiring on the 40m stack match, and we had all our antenna systems up and working. Due to the extreme heat and the summertime contest, I decided not to fix our beverages, which are constantly dragged down by the roaming cattle.

We stayed at the shack instead of the hotel, so it is third-world contesting at it's best. As long as you consume your food before the ants, mice, or roaches do, you are fine. But the shack has a great fridge, so as long as you didn't leave things out it was OK. The air conditioners in the station are maintained by yours truly, purely for self-preservation. And the station has a very large diesel generator, powerful enough to run a multi/multi and keep both air conditioners on in the shack. It formerly had an automatic transfer panel, now it has a doorbell to punch to remotely start the generator, and a manual transfer switch inside. In years where there were hurricanes, we have a lot of power outages, as many as seven one year. That year, we ran most of the contest on the generator. Without it, we would have been had many many times.

Inside the shack these days we have a phone line that is on just for us, and a couple of full size PCs that can connect to the internet. So we can be on packet via the internet for a whole 48 hours if needed. Since we only had two ops, we decided not to bother with packet.

Carsten and I agreed that we would do 6 hour shifts, and change ops every 6 hours throughout the weekend. That was a little long, but with only the two of us there was not much else we could do. This is the same shift that is used by the V26B M/M ops, but there are usually extra relief ops on any shift then. There would be no relief this time. If you got out of the chair, we would loose our frequency and rate. One initial goal was to run at an average rate of at least 100 per hour, for 48 hours straight. In a CW contest with a serial number, that is smoking. I think the 6Y1A guys worked a lot of QSOs with their multiplier station, we did not, we ran 99% of ours, never missing a CQ for 48 hours straight.

The station worked well for us. Our rig was Carsten's TS-850, and my

AL-811 amplifier. I didn't bring my Alpha because of the summertime baggage embargoes. I had to bring an amp that was small enough to sneak on as a second carry-on.

V26B is plagued by the ABS (Antigua Broadcast Service) shortwave station which is about 1/2 mile from our QTH. They transmit 250kw with an erp in the millions of watts, with huge curtain arrays on very large towers. We have to have bandpass filters on ANY rig to even use it there. But with aggressive use of NQN receive filters, and stubs on our amplifiers, and sometimes even stacked filters, we usually manage to co-exist with them. The telephone and internet connection have stacked k-com filters on them to remove the BBC or Deutsche Welle broadcasts from the phone line.

After the contest, we were able to use the internet to see that we might be #2 worldwide for the multi-single category, behind 6Y1A. We were both staying some extra days, so we relaxed at the various beaches on the island, and drove around quite a bit, through the rain forest to look at the mango, fig and palm trees. We also had dinner several times with a friend of Carsten's from Trinidad, and laid the seeds for a possible future operation from a 3-point country (from Tobago).

We rode through a couple small villages with some political turmoil over development going on, with their village blockaded at each end by burned out cars, boulders and old telephone poles. There was just enough room at each end for one car to pass, and or course they were not interested in bothering any tourists, they were waiting for the government to throw rocks at them! But the prime minister went over there a few days ago, and things are beginning to calm down in "Old Road".

Our good friend the Telecommunications Officer had just recently granted the licenses to the opposition political party for radio and TV stations, and the whole island was electrified with Observer Radio, which was doing a very professional job on asking the government some tough questions. Every village we rode through, we could hear Observer Radio, since we were listening to it too!

So in all we had a great time. I hope some of you who have never had a chance to do something like this have enjoyed reading what's involved. Find yourself a vacation QTH and get on the air (safely)!

A VIEW OF "DAYTON" VIA THE EYES OF A FIRST TIMER by Nate Moreschi, N4YDU

After being involved in the wonderful hobby of amateur radio for more than 11 years, I finally ventured to Dayton Ohio for the world's largest convention for ham radio operators.

John Dorr (K1AR), one of the top radio contesters in the world, summarized my first trip to Dayton in two words — sensory overload. The description was perfect. Not only does Dayton provide a flea market with more equipment (both new and used) than people can look at, but it is a meeting place for more than 10,000 people from all parts of the globe.

It was amazing to finally meet the voices behind the radio. Every time I turned my head, I saw someone I knew, but had never actually met. It was truly overwhelming. One thing was clear in all of the organized mayhem -- amateur radio is a great fraternity and I felt truly welcome in the presence of so many great people.

My trip to the mecca of ham radio conventions began on Thursday morning, and I was already meeting new people. My friend Bill McDowell (K4CIA) and I departed from Raleigh with Joe Curlott (W4CTG) and Neill Singletary (K4ESE). I have heard Joe and Neal (both from Wilmington) on the air several times over the years and as many other people I met, they were exceptionally nice.

Joe experienced a nightmare on Thursday that could have ruined the trip for him. When we checked into the Crown Plaza Hotel, he couldn't find his wallet. Joe scurried back to the van to search for it but had no luck in finding it.

Joe replayed his actions throughout the day and feared he had dropped it at rest stop near the Ohio and West Virginia line after setting it down in his lap to pay for a road toll. The look on Joe's face and the rest of us was of disbelief. There was \$1,700 cash in the wallet and we all knew the chances of someone returning it to the police was slight at best.

Joe called the highway patrol of Ohio and to his delight the wallet had been returned by two ladies out on a trip. Amazed by the good fortune, Neal and Joe traveled to a highway patrol station and picked

the wallet up with everything still in it — amazing. It's great to know there are still some honest people in this crazy world.

After that chaos was settled, it was time to focus on the convention and running around the hotel meeting as many people as possible. I had some great conversations with radio operators from Argentina, Brazil, the Czech Republic, Sweden, and many, many more. In all there were probably people from more than 70 countries at the event this year.

I spent an extended period of time with Bob Henderson (from Cyprus, callsign 5B4AGN), and found it most enjoyable. Bob has operated from all around the world, and his stories were quite entertaining. Bob's most recent endeavor was to Tristan Da Cunha Island in the South Atlantic ocean.

Being an amateur radio contester, I was looking forward to Saturday's contest dinner. There were more than 325 people at the event and once again I experienced sensory overload.

I was walking around in a daze looking for a place to sit, and by chance I sat down with Jim Stevens (K4MA) and Will Roberts (AA4NC) of Raleigh. Also at the table were several Texas contesting legends, including Mike Hance (K5NZ). I was amazed at how well I clicked with the people at the table. We spent the rest of the evening conversing about contesting and many other topics.

Mike introduced me to another contesting hero, Ralph "Gator" Bowden (N5RZ) and it was nice to see such a successful contester with a down-to-earth demeanor. In fact, most of the people present were easily approachable. There were a few exceptions, but once conversing about radio topics, everyone seemed to let their quard down.

As far as buying equipment from the flea market goes, it doesn't get any better. Before I left for the trip, people told me I wouldn't believe all the stuff there -- and they were right.

The outdoor stuff was difficult to look at on Friday because of the rain, but I did find a great deal on an antenna for a current project. The only problem was it was too big to fit in the car. Duct tape to the rescue! We fastened the massive mound of aluminum to the roof of the van with rope and tape. Needless to say, the antenna made it home safely, although missing a few nuts and bolts that rattled off somewhere in the fine streets of Ohio. That roll of duct tape experienced a lot use throughout the rest of the trip. The uses for the miracle tape are endless.

I'm still beaming with excitement after the four-day experience to Ohio, and I'm already planning a return trip next year. The single component that makes me the happiest is the welcome that so many people greeted me with. It was an experience that I will never forget.

THE CQ WPX PHONE CONTEST STORY OF AK3Z M/M at WX3B by Jim Nizberg, WX3B (This article was received in April - editor)

I am still in a state of amazement that our team was actually able to set up, test and operate a 5 position high power Multi-Multi station from my house for the WPX contest! John Chesley, AK3Z, and Steve Beckman, N3SB were instrumental in lending equipment and setting up my shack before the contest.

We had a great time, and as advertised, we were a Part Time, (FUN!) Multi. There were only a few evening hours where the station was anywhere near it's capacity of operators. Most of the time it was one or two people operating, and that was part time. The station was opened at about 8:30 p.m. Friday night and shut down at about 2:30 a.m. Saturday day was a vacation day due to other previously planned activities. It re-opened for family contesting time again Saturday evening and closed early Sunday morning. We re-opened at 6:30 A.M. Sunday morning for 10 meters, and did some part time operating with one or two operators until the end of the contest.

Our personal highlight for this contest occurred Saturday night, when two father/son teams (New Blood!) arrived simultaneously. John Hoge, W3JJH and his son (KB3GHE) were at one position, and Steve (Sorry - don't have his call) and his son Andy were on the other low band spot. John is getting seriously hooked on contesting (we have the pictures to prove it) and it's possible that William will follow his Dad's footsteps. John went from No-Code Technician to extra in one day, and became a PVRC member just in time for this contest. Congratulations, and Welcome, John!

It was the first time I had the pleasure to meet Steve and his son Andy. When I asked Steve "Do you know much about contesting" he

replied - "well, I used to contest a while ago". I discovered that his knowledge was better than advertised when he knew how to operate the radio, handle the packet interface, "pounce", and even diagnose my Heil HC-4 boomset failure quickly after he noticed a definitive lack of audio and no responses to his calls. Thanks to a quick replacement, he was back in business.

This contest was particularly challenging for me for two reasons: First, in my mind, I thought it was scheduled for the weekend of the 30th. I took that weekend off, cleared all responsibilities I had, only to find out I got the weekend wrong. Our dedicated effort just got downgraded to the status of Part Time. The next wrench that got thrown in was a business trip that took me out of town until Friday. I watched all my flights leave as I was at work, and then showed up at 5:45 for my 5:45 flight. Needless to say, I arrived at my house, to see an impressive array of operators at midnight calling CQ.

The other problem I hadn't counted on was the local area network of PCs. I deliberately chose writelog as my logging software and quickly built a LAN the replicated what we have at my office. Of course, we don't have 5 1KW radios at my office and it took me 4 tries at hubs to settle on the "slow" kind (i.e. 10 MB/Second). The Auto-sensing hubs kept getting very confused when RF was detected. I need to re-think a shielding mechanism so that RF does not get into any aspect of our LAN. I also ran into 'problems' linking the network together from a software perspective, but I'm confident that most of them will end up as 'operator error' as well.

Here's a run down on some of the other activities:

Steve Sluz, NY3A was seen not once, but TWICE at the shack. Steve is a CW contester, but I think he'd admit he had a great time. He brought a companion with him, and she was seen wearing headphones at one time! Perhaps we have a new YL contesting recruit.

John Chesley, AK32 was seen fishing for those good high-point Multipliers on 40 meters. This can be particularly challenging when you're running a Windom antenna up 30 feet at the peak! It is even more challenging when RF getting into your computer removes the vertical component of your mouse motion! Thanks to John, however, we had a snazzy call sign for the contest, and he will graciously respond to the QSL's. John also donated headphones, and a really cool Kenwood TL-922 amplifier for contest use.

Steve Beckman, N3SB was the master of ceremonies in my absence. He was greeted at the beginning of the contest by fussy PCs that wouldn't network, a packet system that didn't work, and a 160 antenna that had been blown down to about 7 feet above the ground. In spite of all the challenges, he managed at the last minute to bring packet back up (threw the blow-down packet antenna back up a tree), and get the computer network operational. Steve also got the award for the best run rate during the contest. He was heckled during his runs by mobile stations that were out running errands during the day.

Clint Brosenne, W3ARS was slugging it out in the pileups and running stations on 75 meters. Upon my arrival at BWI airport Friday evening — I put at HF antenna on my car and found Clint immediately, only to hear him engaged in a battle for his run frequency. Had it been me, I would have given it up and found a new one, but Clint stuck to his guns, politely told the South American station how long he had been running there — and the YV said "ok — don't worry about it, I'll move.". This was a station with a recognizable call sign, too. Clint had birthday part obligations for the rest of the weekend, but he did find us on a few bands from his house! Thanks Clint, we look forward to future efforts with your involvement.

Joe Ebaugh, N3YIM arrived at 6:00~a.m. sharp and woke me up - he was ready to go. Joe worked 15 meters for awhile while he waited for 10 to open. Once ten was hot, he took the chair and did a combined run and pounce effort good for several hundred QSOs.

Steve Beckman and Jim Nitzberg ran a few hundred more stations each to complete the effort. We ended up with $1800+\ QSO's$ and about 3.3 Million points.

Another bright spot of the operation was how well our 40 meter dipole performed on 15 meters. When you're short on antennas, it's amazing what works. Several hours on 15 yielded run rates averaging 90/hour with those nice blasts of close to 200/hr for 10 minutes! We were being called by JA's, DS's, etc. I guess it was the guys on the other end of the QSOs with big antennas. I'm sure it helped that we had a 'rare' prefix and were being spotted frequently.

We saw our highest rates on 20 meters - where at one point N3SB was totally out of control. He ran a pile of European Russian and other

stations that was quite impressive. Steve also won the award for trucking in the most equipment to the shack. There were microphones, cables, a computer, and two top of the line radios - the Kenwood 850, with all filters, and Steve's prized (new) possession, the Yaesu FT-1000MP.

I was very impressed with the Dunestar band pass filters. None of the radios were getting into each other, (once we put the 160 antenna back up!) and three of our antennas were within a few feet of each other. I had expected all types of RF troubles - yet all radios and antennas performed flawlessly!

There was a midnight BBQ shared by Steve and Jim at 1:00 a.m. Sunday morning as an energy booster prior to resuming the pileups. Actually, things had slowed down after midnight and we shut down at about 3:00 a.m. that morning.

This was so much fun I think we'll do it again for WPX/CW. The only question left is: Who's call sign will we use for this one?

THE N3RR LIGHTNING PROTECTION SUBSYSTEM by Bill Hider, N3RR

Lightning protection is a "must" for every ham station. Because the N3RR station is designed to be a top-ten, single-op assisted station and also be a PacketCluster node serving southern Montgomery County, MD and northern Fairfax County, VA, the design of its lightning protection station must include provisions to keep the station on the air, 24 x 7 x 365 even during lightning storms. So, I undertook to design the station so that all equipment inside the shack is always hooked-up to its AC power and to its antenna(s).

This Newsletter article is a shortened version of the complete article that appears on my Website: http://www.erols.com/n3rr (click on "Lightning Protection Subsystem" in the System Design table).

Sub-system Considerations. There are several individual items of an amateur radio station that must be considered when designing a lightning protection system:

Personnel in the shack, the Ham Shack/house, electronic equipment in the shack (TX, RX, AMPS, PCs, and the like), electronic and electrical equipment elsewhere in the house, rotors and their controllers, antennas, tower-mounted relay switchers, and the tower itself.

Lightning Protection Design Overview. First and foremost, I abided by all of the specifications in ANSI/TIA/EIA-222-E in effect at the time I implemented my system, 1994. (The current specification is "-F-1996"). Second, nearly all of the lightning protection design I used was derived from Polyphaser Corporation.

The Ground Grid. Central to any lightning protection system is the grounding system, or ground grid, to which is attached the lightning protection elements and to which all ground busses/wires are attached. Pictorially, here is the ground grid system I implemented at the N3RR OTH.

(The ground grid diagram appears in the paper edition of this issue. You may see this diagram on N3RR's web page. editor) $\,$

I used a combination of CadWelding, Andrew Corporation components, and

Polyphaser 1.5 inch copper strap with SS-30 anti-seize compound from Jet Lube to affect the ground connections.

Also, I used 8 foot copper-clad ground rods with 16 foot spacing between them. I used Andrew Angle Adaptor Kit Type 31768A (Andrew Catalog 38, Page 600) to attach the ground wire to each tower leg and each guy anchor.

Coax Cable Lightning Protection. I installed a Hoffman steel box at the base of each tower and at the house, as the Single Point Ground ("SPG). On each coax line, I am using Polyphaser DC-Block, bulkhead lightning protectors (model IS-B50HN-CO*), appropriate for the frequency band/power level needed.

For the rotor/switching control lines, I am using Polyphaser IS-RCT* 8-conductor rotor cable lightning protectors
All coax cables and the 1.5 inch copper ground strap connect to the
SPG panel in the shack where individual coax cables and ground cables
connect and distribute their signals to equipment, switches, and other
ground points.

The 1.5 inch copper strap is also connected to the main AC panel ground and is routed out of the basement window where it becomes a *continuous* run of copper strap forming the ground grid connecting

the SPG/AC/TELCO grounds together on the OUTSIDE the house.

Whole-House Lightning Protection. To further ensure that my house is protected, I use a Joslyn Model 1265-85 whole-house lightning protection device at the power panel. With this whole-house lightning protection device, I am much more comfortable that high voltage AC and lightning will not destroy/harm sensitive electronics equipment at the N3RR QTH (Ham and non-Ham equipment).

On my Website, there are 45 hyperlinks to photos of the installation, how to install ground kits, reference links to manufacturers' products, and more. Obviously, this was too much material to include in this Newsletter article and I encourage you to click on http://www.erols.com/n3rr and see how I designed and implemented the lightning protection system for the N3RR station.

PVRC-NC APRIL MEETINGS MINUTES; REGULAR/RARSFEST by Guy Olinger K2AV

On hand (5th) K2AV, AA4NC, KE4GY, K4QPL, K4HA, K04PY, NT4D, N4CW, K1MW, N3NPQ, WW4M, N4HAF, K3KO, N4YDU, K4CTA, K4MA (16). First Meeting: N4HAF, K1MW. Second Meeting and voted into membership: K4CTA. Welcome Bill. Chapter membership at 40.

K4MA there early, left early for something more important than eating, but not before instructing mouthpiece K4HA on what to say. Some places that's called delegation.

K1MW is ex-NT40. That was either in honor of 17 dump trucks of Connecticut loam in his backyard, or to get rid of all the QSO B4's on account of NT4D, one or other, can't remember.

When asked point blank, K3KO reported he has now gone over thirty days without blowing up an amp. (Considerable cheering and applause.) One day at a time is how you lick habits like that. We know it's tough, but keep it up, we're all behind you. Brian has also developed a new procedure for not listening to the radio while doing a phone contest — only work spots. Not clear whether or not he bothers to keep a log. [Reporting from the annual expedition down to Barbados as 8P9JA, Will AA4NC reported that he spent a lot of time sick, either due to or revived by a quantity of medicinal rum, not entirely clear on that. It was also somehow related to problems on 160 (300 0's). K4MA had already flown the coop so unable to elicit clarifying opinion. Was noted by the peanut gallery at the east end of the table that a lot of us would like to have such problems.

There was a lot of discussion whether a 7028 crystal was a good frequency for a QRP rig and especially whether it would be a good run frequency in a DX test. THAT's PVRC attitude.

KS4XG's antenna takedown was reported to have gone well, without the use of hacksaws. Whether the chapter's sole tower jack survived the episode was not reported. Pete is OUT of the old place, though. Congrats.

 $\tt KE4GY$ is now in N. Durham. $\tt NT4D$ reported good results with his new loop antenna. $\tt WW4M$ is trying to train a bunch of new guys at W4ATC.

K4CIA is busy putting up towerS. Note the plural.

Group approved a possible return to Jaspers for the Annual Dinner. Several attending noted that there would be no need to report in the minutes that the meeting was called to order as there never was any order, and no need to report releasing the meeting to miscellaneous BS afterward, as it never stopped.

All reminded to stop by the PVRC table at RARSFest. The annual PVRC table at RARSFest was voted by chapter membershi April, 2000 as a regular meeting to be called to order for what ever business deemed proper. 2001 version called to order for business at

On hand and signing in (8th at RARSFest): KS4XG, WW4M, K4HA, K4NYS, KO4PY, N4XD, K3KO, N4CW, N4VHK, N2NFG, N4YDU, W2CS, K1MW, N2QT, N3ND, K4TMC, N4HAF, KG4CXO, K4CIA, W4DF, K3VW, N3NPQ, N4AF, N8CH, WJ9B, NT4D, WD8EBI, W4IDX, K2AV, NI4S, NX9T, KQ2P, WB4VIM, W4SD, KE4GY, KA4NWS (36). Second meeting and voted into membership: K4NYS, K1MW, N4HAF, W4IDX. Congrats Chuck, Mike, Neal, Dave. Chapter membership is now at 44. All new members admonished to turn in a score for WPX. Meeting adjourned at 11:10. Frantic buying of miscellaneous stuff resumed.

CW torture machine (RUFZ) was in place and very well attended. High scores as certified and commented by KS4XG.

 $\begin{array}{cccc} & \text{max.} & \text{max.(all)} & \text{Check} \\ \text{Place Call Points Speed Speed Trys Sum} \end{array}$

```
2 2624977
    K3KO 29489 297 312
 2
    K3KO 28558 312 312
                          2 2648821
    N4AF
         25498 290 290
                          1 2287443
  N4YDU
         24324 312 312
                          2 2539134
 4
 5 KA1LOE
         20280 277
                    277
                          1 2033138 N4CW dressed as a ladv
  N4YDU
          19819 290 312
                          2 2219727
          18774 245
                    250
                          2 1725455
    W2CS
  W1IHN
         18765 265
                    265
                          1 1877784 formerly known as N4CW
 Ω
   N4CW
         15807 250 250
                          1 1608385
         15797 231 231
10
    W4DF
                          1 1464763
    W2CS
         15767
               250 250
                          2 1604825
11
    WJ9B
         12315 208
                    208
                          2 1176949
          11510 219
  KE4GY
                    219
    WJ9B
          10274 208
                    208
                             1082898
14
                          2
15 KA4NWS
          7570 160 160
                          1
                              767539
16 KQ2P
          6535 164
                    164
                          1
                              704703
17
    WA4A
          4192 156
                    156
                          1
                              543858
18 KC4RTT
          1757 117
                    117
                              319216
                          1
19 WB7OND
          1575 100 100
                             258054
20 KOAAA
                               1534
            14
                 0
                      0
```

Next meeting is the Annual Dinner, Wednesday May 16, 7 pm. Site negotiations proving interesting, but will be resolved in a day or two. Will be announced in a mailing, web site, and on PVRC reflectors. Mailing and web site will contain map and directions. Speaker is Eric Scace, K3NA, who at minimum will report on his Russian adventures.

PVRC-NC ANNUAL AWARDS MEETING by Jim Price, WW4M

The annual meeting was held on 16 May 01 at the Fox and Hound at Cary, NC from 6:30 to 9:45 pm.

Attendees (20): Special guest Eric K3NA, Guy K2AV, Joe NA3T, Jim WW4M, Gary W2CS and Linda N2YL, Howie N4AF, Mike K1MW, Bob K4HA, Nate N4YDU, Brian K3KO, Bert N4CW, Jeff NX9T, Bob N2NFG, Neal N4HAF, Jim K4QPL, David W4TDX, Andy NI4S, Bill W4ZV + XYL Charlanne.

Regrets: K4MA, KS4XG, AA4NC, K4NYS, K4CIA, N4VHK, NT4D, N3NPQ, K4TMC, and N4TL.

Membership: This was the second meeting for Andy NI4S (his first being at RARSfest last month), who was unanimously voted into membership by those present; Andy was sponsored by W2CS. Welcome Andy! Andy says he is just getting his station back up after few-year lapse and made a few small efforts during the 2000-1 season. He's running an IC-735 with wire antennas on a city lot, and his ham interests include PSK31 (he'd like to try working satellites). Other interests include computers/ networking/ Linux/Unix, he's a licensed EMT, and he enjoys amateur photography and the outdoors. Membership now totals 45. (New members since the last annual meeting: N4XD, N4YDU, K4CIA, K1MW, N4HAF, K4NYS, W4IDX, N14S.)

The meeting commenced at 6:48 as everyone placed orders for dinner, then we went around the room and introduced ourselves by name and callsign.

Member News and summer plans: N4YDU is working on a tower for his house in Youngsville. Until now he's been working entirely with wire antennas.

W4IDX has upgraded from a G5RV to a Windom and plans to be on for WPX $\text{CW}_{\:\raisebox{1pt}{\text{\circle*{1.5}}}}$

NX9T passed around pictures of his new 75' Trylon tower with 10 cubic yards of concrete in the base. He has a 5-band quad on top (similar to what he's worked with before), topped by a 2m yagi.

K4QPL will be operating WPX CW using the club call NV4X. He hopes to find a way to get on the air for Field Day as GW/K4QPL.

 $\mathtt{WW4M}$ plans to finish his QRP transceiver kits in time to work on his CW during Field Day.

K1MW will be putting up a second tower this summer -- a shorty with a quad. Mike is also considering purchasing AR cluster software and would appreciate comments from anyone who's used it. K3NA said that K4JA thinks highly of it.

This summer K4HA will be replacing his tribander with a TH6 modified to a TH7.

N4HAF was struck by lightning last weekend, but luckily the bus took the brunt of the hit and there was no damage to any ham equipment. Neal will be putting up delta loops this summer. He's got a new MP $\,$

and recently purchased CT. Neal will be on the air from home for WPX CW and will operate with RARS for Field Day.

W4ZV hopes to set a new North America record for 10m in WPX CW using WW4M's callsign. Bill has three phased 10m yagis, which he might switch over to tribanders. Other projects include 2 KT34Xas on the ground in Colorado that will be brought home and mounted on a 180' tower, which is already shunt fed for 160m.

NI4S has been using wire antennas from his home in north Raleigh. He'll be on the road during WPX CW but has summer plans for adding more wires to his antenna farm.

N4AF has been polishing up his station in preparation for WPX CW. Howie will operate with the usual crew: N4CW, W2CS, K2AV, and K7GM.

W2CS is happy to have worked at N4AF this past year. He and N2YL will be visiting Europe and Alaska this summer. Linda is also hoping to persuade Gary to put up a new tower. :)

N2NFG is happy to have finally learned how to grow grass without attracting the attention of the DEA.

N4CW will be at N4AF for WPX CW, and will paper log for FD in Maine. Bert will be back in Raleigh for the rest of the summer.

K3KO reports that he has figured out how to balance the financing of his radio hobby with competing family interests, and recently replaced his 850 with a 1000 MP. Brian has a few antenna projects lined up for the summer.

 ${\tt NA3T}$ says his 5-year-old has been keeping him busy and has been quiet on the bands lately.

Special guest Eric K3NA is back in the U.S. for a brief visit. On his drive down from Frederick, MD, he made a stop in VA to check on the progress at K4JA (www.k4ja.com). Eric was going to drive back the next morning in time to catch a flight from Dulles to the Dayton Hamfest. Eric will move back from Russia at the end of the year; he has been househunting and hopes to close on a place north of Boston.

Awards. Remembering that for NC Chapter awards purposes we are counting WPX-CW as the next contest year, and this year only analyzing 5M operator points (not host points), which correspond to the Chapter's relative contribution to club score.

Prior season Chapter total was 40 meg, and this season was 53 meg, a whopping 1/3 improvement. Notable in the mix was 13.2 meg of operator points from five calls (ten total ops) at NY4A in the three major CW DX tests. Also in the prior season an operator scored 1 meg or more for a single test six times – this season that number was up to 13 times, more than doubling.

Special Award: NY4A CW Multi-Ops at N4AF: N4AF W2CS N4CW K7GM K2AV 3 Tests, 10 Ops, 1.32 Meg 5M Pts/Op Quarter of NC Chapter Total for 2000/01

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Rookie & Comeback Award 2000/01
N2NFG - First Place 1,503,576
N4YDU - Second Place 517,018
WYADY - Third Place 233,949
WX4DX - Third Place
                               233,949
High 5M Operator Points
                                    2000/01
K4MA - First Place 7,180,150
N4AF - Second Place 7,175,750
AA4NC - Third Place 6,474,560
W2CS - Fourth Place 6,297,603
N4CW - Fifth Place 4,408,442
Most Improved 5M Op Pts 2000/01
W2CS - First Place
K2AV - Second Place
                                  75%
K4TMC - Third Place
WW4M - Fourth Place
                                   66%
                                  57%
K4MA - Fifth Place
                                   40%
AA4NC - Notable Mention
                                  23%
K4HA - Notable Mention
                                  22%
N4AF - Notable Mention
N4CW - Notable Mention
                                    98
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Carnac presented the Second Annual N4AF Flaming Balun Memorial Award (Infamous Auto Bagel Balun). This award is presented annually to the member having evidenced the most pathos evoking sad sack- or Murphy-related event(s) during the contest year. Note that the award is in memory of the Flaming Balun, not N4AF who is still with us.

Although there were some number of worthy candidates, including AA4NC's many fate-tempting violations of the antenna foul weather and suffering installation rule, including the use of a bucket truck, the clear winner this year was Brian "Smokem" Alsop, K3KO. He takes the Auto Bagel Balun trophy for his record-breaking three amp destruction spree, including a one-dit blowup of a final in his new ACOM, AFTER surviving the RTTY contest without so much as a hiccup.

The presentation included directions for using the Auto Bagel Balun for detection of extreme RF fields, and a warning against human consumption of the component bagel, which has been hermetically sealed to preserve the bagel's dielectric coefficient.

After presentation of the Flaming Balun Memorial Award, Carnac's made the following fearless predictions for 2001/02 Contest Season:

K2AV - Who, after doing the night shift in another NY4A at N4AF CW WPX multi, at 8am sleep walks to the van in his bathrobe, gets in, heads out the driveway, and turns east, dreaming he's late to work. He only stops trying to find SAS Institute when he gets stuck in the tidal flats of Pamlico Sound. When the rest of the gang chasing him catches up they find him running 10 meters on the van's FT100, keeping log in the margins of a Rand McNally Road Atlas. Astounded but at the beach anyway, they all take turns on the mobile and swimming. When they get back to the house two hours later, KZAV goes back to bed. It's only when he gets up later and asks why all the mud on the van they realize he was asleep through the whole affair.

K4HA - In the 10 meter contest, K4HA has a huge 6 hour SSB run going on the best run frequency of his life. Unfortunately, HK4A and AK4H are running on the same frequency at the same time, generating what becomes a world record for UBN's related to a single submitted log, times three. Afterwards, when the contest committee figures out what happened, in a rash of pity they combine all three logs and make the combo a special entry class, calling it multiop - multitransmitter - multicall - multilocation - single frequency.

N4AF N4CW K2AV W2CS - Will do another NY4A multi/multi, in the SP contest, and outscore the entire East Coast of the US, making NY4A-ski a household word in Poland.

K3NA - Continuing his string of unusual world-wide ham operations, will do the CQWW undercover from the Forbidden City Palace in Beijing, using a stealth G5RV made from #32 wire, wearing his Fu Man Chu Last Emperor outfit, running an FT100D disguised as a tour bus change maker. The whole incredible event comes to naught however, when it is discovered there is no way to submit a Cabrillo log in Mandarin.

PAPERS AND ARTICLES by Chapter members:

K3KO - in IEEE, "Early detection of impending amplifier failure in RTTY and PSK31 contests using X-ray detection and trace ozone sampling." N4AF - in NCJ, "How to construct an absolutely hurricane-proof KT34XA from iron sewer pipe."

W2CS - in QST Hints and Kinks, "How to construct a rotator for the N4AF hurricane-proof KT34XA using a diesel engine from a concrete truck.

 ${\tt N2NFG}$ - in Better Homes and Gardens, "How to beautify water-filled premature tower excavations by converting them into ground level bird baths and doggie swimming pools."

K2AV - in American Journal of Psychology, "Social Skills - the pathology of converting a two-week tower project into a two-year tear jerk sympathy cull."

The awards and predictions were followed by an enjoyable presentation and picture show from Eric Scace K3NA, who has been living in Moscow for several years. Eric talked about operating from that part of the world and its unique DX/contesting conditions, as well as changes taking place in Russian society. His talk received many kudos including this from N4CW: "Eric, K3NA, was most entertaining and eloquent describing not only operating from Russia, but living conditions there. His answers to audience questions made everything very clear."

The meeting wrapped up at about 9:45 pm. Next Meeting: the chapter's annual Summer Picnic in late July or August. WW4M may also look into group tickets for a Durham Bulls game this summer. Details TBA.

NORTHWEST MEETING NOTES, 15 MAY 2001 via Ed Steeble, K3IXD

The NW region met at Paradise Grill in Frederick on 15 May 2001.

Thanks to N3VOP, we didn't have to wait until the meeting date to learn that Tully's has closed it doors. We had been meeting there at least two years. W3NRS provided some suggestions of Frederick area restaurants that might give individual dinner checks and provide an area for our meeting without charging a fee. K3SKE did the checking and the May meeting was held at the Paradise Grill, the home of the Mongolian buffet, where we met once last year. In June we will again hold our dinner/meeting at the Paradise Grill and discuss where future PVRC NW Region dinner/meeting will be. I was out of town, seeing my son-in-law getting his MBA from Emory University Goizueta Business School. Sid, K3SX, chaired the meeting and provided the following notes. Thanks, Sid.

The meeting was held at Paradise Grill on May 15th. With Dayton approaching the attendance was a bit down. Those hardy souls, and food lovers who made it, were: WD3A, K3UG, W8ZA, K03GA, K3SKE, K3LP, and K3SX. The menu and conversations were large and continuous. The reporting phase, occurring between the egg rolls and lo mein, was; K3SKE brought us up to date on Harriet, XYL of W3NRS. He also had 11 QSOs with the 3B6RF expedition.

W8ZA is fully recovered from his surgery; K3LP had computer photos of the new QTH and ham shack under construction; WD3A has been busy travelling; Chris, K03GA made this his second meeting. He has operated from W8ZA (as have most of us). We did not have an application or a quorum to vote on Chris so we will take of this soon. Chris went from zero to Extra in a short time! K3SX was lucky to work the 3B6 on 160 for country #212. The group had several reminders of local June doings- Frederick hamfest on Fathers Day; W3LPL open house, Manassas hamfest. Submitted by Sid, K3SX.

Remember, the June meeting will be at the Paradise Grill in Frederick. It is across the street and a block further west. Paradise Grill, 1275 W. Patrick Street (Frederick Shoppers World), across the Street from PEP Boys. (301) 682-6066.

The NW Region meetings are on the third Tuesday of the month, in June that is the 19th. Most arrive around 6PM for dinner, the meeting begins at 7:30 PM.

OVER-THE-HILL LUNCHEON by Ben Shaver, AA4XU

The Over-The-Hill lunch group of the PVRC met today at MainStreetUSA in Annandale, VA. Attending were: K6ETM George Sinclair, W3GN Lawrence Fadner, W6AXX Howard Leake, W3ABC Hugh Turnbull, W4DM Dale Harris, K7CMZ Mel Woods, and AA4XU Ben Shaver. Of those in the group, only W3ABC had communicated with a spark gap transmitter legally, and that was in Europe. Like the Saturday afternoon western movies of another era, spark still carries a fascination for many radio amateurs. All of us are looking forward to WPX this weekend. The next meeting will be held in Beltsville, MD in late June. All PVRC members are welcome. To be added to the E-mail announcement list, E-mail AA4XU (). To be added to the Telephone announcement list, call Bill Leavitt W3AZ (301-292-5797).

WWW.PVRC.ORG UPDATES by Pete Smith, N4ZR

The big news is that we are beginning to post on the web page presentations that visiting experts have done at PVRC meetings, as well as those that our members have presented at events like Dayton. These can be viewed either as online slide shows or downloaded as Powerpoint presentations to review at your leisure. WXOB's stacking presentation was first up, recently followed by K3NA's exciting "TowerPlan" pitch, and N4ZR's "Why Do They Call It Wireless -- Behind the Radios in Multi-Radio Contest Stations."

The first couple of presentations by PVRC members at Dayton 2001 are now available on the PVRC home page. The URL for both is: http://www.pvrc.org/dayton 2001.htm. They are:

Eric Scace's Antenna Forum talk on TowerPlan, the exciting web-based antenna system design tool he is developing with Fred Hopengarten,

Pete Smith's Contest Forum talk, titled "Why Do They Call It Wireless --Behind the Radios at Multi-Radio Contest Stations"

W4DR and Pete are trying to figure out how to get his DX Forum presentation into electronic format. In the meantime, Pete believes there are more presenters out there in PVRC-land and he feels we should make available as many as possible, without regard to whether they are, strictly speaking, contest-related. So send Pete your Powerpoint files or, if you did it some other way, drop him an e-mail so the mechanics can worked out.

In the coming months N4ZR will be reorganizing and streamlining the way information is presented on the Web page, so it's time to let him know what you would like to see different. Contact him at <a href=.

Check it out -- www.pvrc.org.

SHORT NOTES by the editor

Steve Beckman, N3SB, won the Maryland Low Power Category of the 2000 CW Sweepstakes contest.

Nat Heatwole, WZ3AR is planning on another trip to Chincoteague Island (IOTA NA-083). If anyone within PVRC has a spare beam that would cover 10-20m and the WARC bands, he would like to buy, rent, or borrow it.

Tyler Stewart, K3MM reports that at Dayton he learned that there is a new SS unlimited player, The Society of Midwest Contesters. There has been and ongoing discussion about the considerable effort needed by PVRC to regain SS leadership.

The League reports that in Maryland-DC, PVRC member Tom Abernethy, W3TOM, will succeed Bill Howard, WB3V, as SCM.

Pete Smith, N4ZR was playing with our database and reports that we have 763 total members, of whom 537 are in-area.

Dave Baugher, WR3L, Treasurer, received many badge payments and donations last month and is sorting the information which will be listed in the next issue. He thanks those that send in donations, badge orders, and ARRL renewals.

Bill Schuchman, W7YS and Roger Barron, W4EI identified PVRC members in the 1950 era FD photo. More on this in the Aug/Sep issue.

The reunion on-the-air just concluded (June 4 utc). Logged or heard were: DK5AD, K2PLF, K2UFT, K3CKT, K3DI, K3RV, K3TW, K3ZO, K4AW, K4TJ, K6SG, KT4P, KT5X, K2IO, N0TK, N3CW, N4AF, N4ZR, N5JB, N6RA, W2RS, W3AU, W3CP, W3FZV, W3GRF, W3HVQ, W3KC, W3PAR, W3TMZ, W4AGI, W4DM, W4EI, W4HM, W4RIM, W4YE, W5KL, W6MVW, W6UM, WA7LT, and WR3L. Results next issue.

S C O R E S by Bob Dannals, W2GG

* Changes/additions/deletions to W2GG via or packet. * ### = missing information

CQ 160M SSB #3 (FINAL - 05.07.01)

QSO ST DX CALL SCORE SINGLE OP HIGH POWER W4MYA 1043 57 24 200,070 N3HBX 654 51 8 85,078 K2UOP 594 51 11 81,964 250 44 5 282 38 4 K3K0 27,342 W4HJ 25,914 K2PLF 179 15,444 37 2 N3UM 152 32 13,414 N4CW 145 31 10,362 7,099 WA4QDM 100 28 3 W2BZR 96 24 2 5,590 4U1WB 52 16 1,819 SINGLE OP LOW POWER N2NFG 430 45 340 32 48,776 WK4Y 25,025 172 43 5 N4MM 18,384 146 32 2 K4TMC 10,608 NA1DX 173 27 10,360 118 29 4 112 27 3 160 26 1 8,778 W2GG W3EKT 7,950 K3DNE 7,344 AD3F 70 (23) 3,427 W3CP 61 (22) 3,014 SINGLE OP QRP MULTI OPERATOR K3IXD 301 40 6 30,774 K3DI 123 34 3 10,286 DXPEDITION HA/W0YR 536 1 54 152,570

```
24 LOGS SSB TOTAL 811,392
47 LOGS CW TOTAL 3,674,159
71 LOGS MIX TOTAL 4,485,551
 - - - - - - - - - - - - - -
Guest Operators:
        AJ3M op.
Multiop operators:
Single op plus packet unless
  indicated below.
CQ WPX SSB (FINAL - 05.04.2001)-----
CALL PWR BAND QSO MULTS SCORE
        SINGLE OP - UNASSISTED
KF3P C 3456 1036 9,092,972
K3ZO C
              2742 913 6,799,111
NY4A C 10 2152 882 4,441,752
N3HXQ C 1510 692 2,550,020
N3HBX C 10 1187 629 1,832,906
KN1DX C
            1018 533 1,433,237
W3UJ
       B TS 997 530 1,349,910
K2UOP C
               903 499 1,136,223
NV4X C 820 445
4U1WB C TS 1095 494
               820 445 1,001,695
                           995,410
           798 496
N4MM C
N3UN
               709 417
       В
                            756,855
W4YE C TS 665
                    411
                            749,664
W2GPS C TS 725 419
                            713,138
K3DSP B
               644 415
                           653,210
KC8FS B TS 612 381
                            612,267
N4YDU B 507 3361
N3FX C TS 490 329
K3GV C 436 292
W3UL C 381 270
N3FNE B 387 265
N3HS C 300 243
M4ZR C 288 221
                            426,384
                            411,908
                            299,884
                            235,170
                            226,840
N4ZR
       С
               288 221
                            164,866
              231 184
N2NFG B
                             95,128
N3EYB B
               172 149
                             60,643
* SINGLE OP - ASSISTED
          1558 740 2,823,840
752 498 988,032
KV3R C
NA1DX B
W2GG B
K3KO C
               814 485
                            979,700
               450 443
                            559,066
KO4MR C 10 460 318
K3IXD C 450 341
K1SE B 15 147 132
                            391,809
                            41,052
 * MULTI-MULTI
W4MYA C 5390 1282 16,509,596
WR3L C 2160 856 4,699,440
AK3Z C 1839 811 3,392,413
* DXPEDITIONS
A61AJ #### 4,485,102
TI7/N4MO 10 2113 712 3,574,240
7J1AOE C 322 195 174,330
B = LOW POWER
C = HIGH POWER
TS = TRIBANDER + SINGLE ELEM 160-40
BR = BAND RESTRICTED
R = ROOKIE
 38 LOGS SSB TOTAL 76,236,897
OPERATORS:
4U1WB
        AJ3M
7J1AOE K3DI
A61AJ
         W3ZZ plus 11 non-PVRC
AK3Z
         AK3Z N3SB NY3A WX3B W3ARS W3JJH N3YIM + 1 non-PVRC
KF3P
         K3MM at W3LPL QTH
KN1DX
        K4ZW
NV4X
        K4MA at AA4NC QTH
NY4A
         W47.V
        KF4QQY N4DEN N4EHJ W4DR W4HJ W4HZ W4MYA WK4Y WA4QDM
W4MYA
WR3L
        WR3L K3FT AA3SC KA3TUL
```

CQ WPX CW (#3 - 05.31.2001) -----

```
CALL PWR BAND QSO MULTS SCORE
       SINGLE OP - UNASSISTED
K3ZO
            2506 762 5,583,936
WW4M
       C 10 1585 678 2,578,434
WJ9B
      В
             1480 590 2,300,410
N1WR
      В
             1270 562
                        2,000,158
N4YDU TS
             1361 557
                        1,862,051
NV4X
       TS
             1101 492
                        1,368,744
W3UJ
              987 490
       В
                        1,298,990
K2UOP
      С
              909 449 1,165,155
W4IDX B
              845 431
                          885,705
W3CP
       В
              436 302
                          425,518
K4MA
       C
              475
                  279
                          375,813
KS4XG TS
                          361,494
              511
                   302
K1MW B 15 457
                   305
                          352,275
N4MM
      С
              339
                   269
                          250,977
K3DSP B
              357
                   251
                          212,597
K4HA
      В
              329
                   232
                          203,696
W2GG
      В
              301 247
                          188,955
      TS
ихот
              301 219
                          178,923
KO1N B 15 647 212
K80QL C 10 174 155
                          137,164
                           60,140
* SINGLE OP - ASSISTED
NX3A C 2297 774 4,870,008
K3KO C 1230 612 2,260,728
K3DI
      С
            716 459
                         965,277
* MULTI-SINGLE
            3319 928 9,247,520
KM4M C
* MULTI-MULTI
            5559 1046 16,343,750
NY4A C
WK4Y
      C
            4304 1035 11,771,000
            4027 981 10,158,255
NR4M C
WR3L C
            2931
                   854 6,488,692
AK3Z C
            1347 579 2,100,612
* DXPEDITIONS
V25A C 4815 961 6,813,971
A = ORP
B = LOW POWER
C = HIGH POWER
TS = TRIBANDER + SINGLE ELEM 160-40
BR = BAND RESTRICTED
R = ROOKIE
30 LOGS CW TOTAL 92,810,948
39 LOGS SSB TOTAL 76,900,272
69 COMBINED LOGS 169,711,220
OPERATORS:
AK3Z
        N3SB NY3A AK3Z WX3B
        AC4HB K4JA K4ZA K9GY K9JY W4JVN
KM4M
KO1N
        K1KO
NR4M
        NR4M K7SV K1SE K4EU K4EC K4GMH WA4JUK K4ZW KT3Y WK3W ND3A
NV4X
        K4QPL
NX3A
        W3PP
NY4A
        N4AF W2CS N4CW K7GM K2AV
V25A
        N3OC plus one non-PVRC
        K4GAU W4DR W4HJ WA4QDM WK4Y W4MYA
WK4Y
WW4M
        W4ZV
WR3L
        WR3Z K3FT WR3L
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